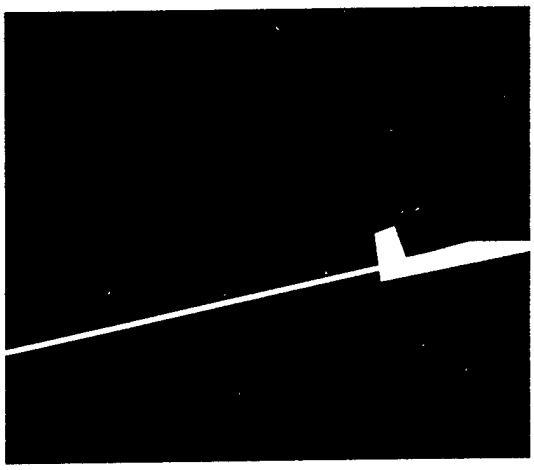
Contract No. F33657-92-2055/DO0015
CDRL No. A002, A007
Report No. SID/SD-94/0003

(Unclassified)



SIDAC

Supportability Investment Decision Analysis Center

Instructor Lesson Guides

for

PC-TCP/IP BOOTP and NFS Analysis

Prepared for

HQ AFMC/CIXR
Wright-Patterson AFB, Ohio 45433

DISTRIBUTION STATEMENT A
Approved for public release;
Distribution Unlimited

April 15, 1994

19970128 195

Prepared by

Battelle Dayton Operations
5100 Springfield Pike
Dayton, Ohio 45431

Submitted by

SIDAC
5100 Springfield Pike
Dayton, Ohio 45431

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	April 15, 1994	Training Material

4. TITLE AND SUBTITLE
Instructor Lesson Guides for PC-TCP/IP BOOTP and NFS Analysis

5. FUNDING NUMBERS
Contract Number
F33657-92-2055

Delivery Order Number
0015

6. AUTHOR(S)
Tittl, Marti

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
Battelle
5100 Springfield Pike Suite 219
Dayton, Ohio 45431-1262

8. PERFORMING ORGANIZATION REPORT NUMBER
SID12128

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
HQ AFMC/CIXR
4225 Logistics Avenue Suite 11
Wright-Patterson AFB, Ohio 45433-5750

10. SPONSORING/MONITORING AGENCY REPORT NUMBER
SID/SD-94/0003

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution is unlimited

12b. DISTRIBUTION CODE
A

13. ABSTRACT *(Maximum 200 words)*

This manual documents a data communications technical analysis as an instruction guide to data communications networking.

14. SUBJECT TERMS
Computer Communications

15. NUMBER OF PAGES
115

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	

PC-TCP/IP
BOOTP and NFS
Analysis

FOR SIDAC TASK 006
Contract Number F33657-92-D-2055

Submitted to:

Department of the Air Force
Sacramento Air Logistics Center (SM-ALC/FMDD)
McClellan Air Force Base, CA 95652-5990

Submitted by:

Battelle Memorial Institute
5100 Springfiled Pike Suite 219
Dayton, Ohio 45431-1231
(513)-258-6756

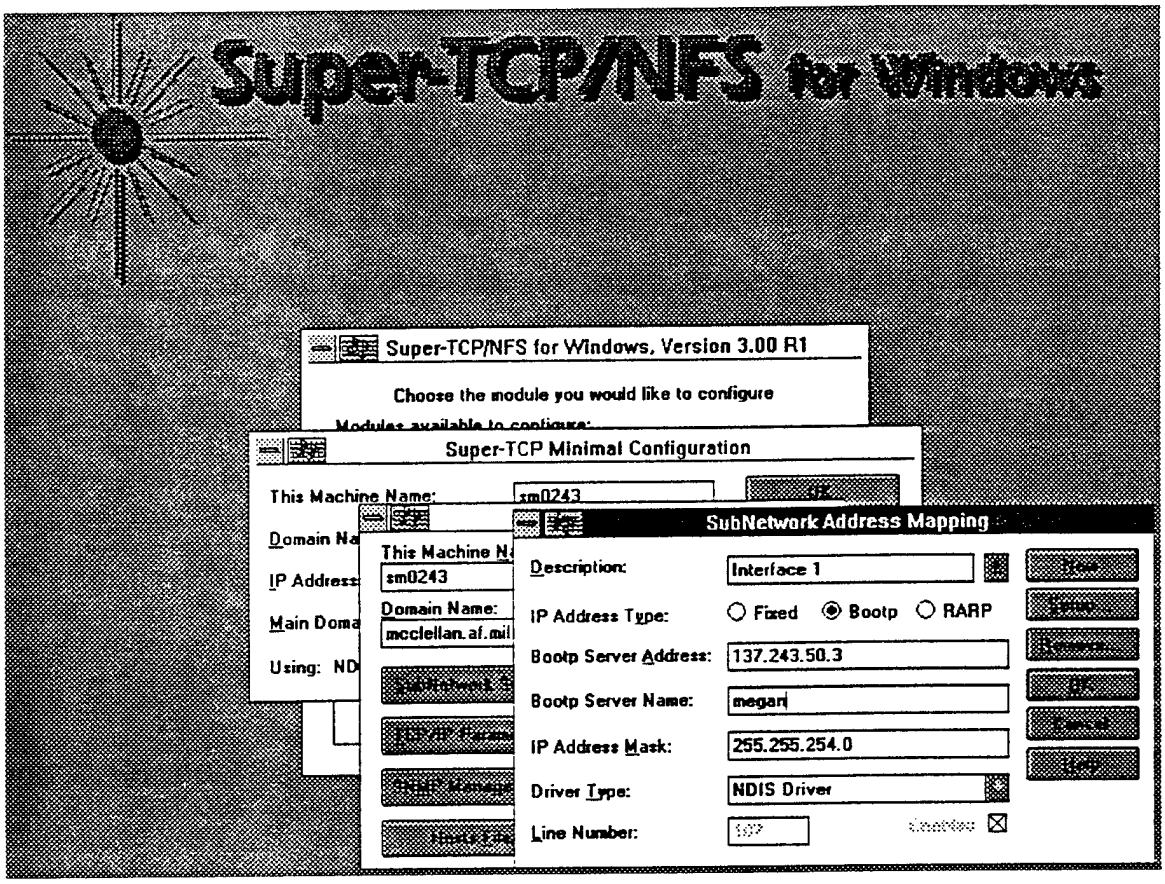
14 January 1994

This report is a work prepared for the United States Government by Battelle. In no event shall either the United States Government or Battelle have any responsibility or liability for any consequences of any use, misuse, inability to use, or reliance upon the information contained herein, nor does either warrant or otherwise represent in any way the accuracy, adequacy, efficacy, or applicability of the contents hereof.

Foreword

The following document is provided as an addendum to the PC-TCP/IP Installation and Configuration Guide prepared by SM-ALC/FMDD. This information provides insight into the Bootp and Network File System (NFS) options of the Frontier SuperTCP PC-TCP/IP software application.

If the Bootp and NFS options are selected for installation, the following screens will appear during the install process. The information provided is an example of the data that will be required to successfully complete this portion of the install process.



During the initial installation and configuration of the TCP/IP software, the user will not be able to specify the Bootp option. The assigned TCP/IP address will need to be put in. After the install is completed the user may re-enter the Setup program by double clicking on the Setup TCP icon in the SUPERTCP program group.

From the SuperTCP/NFS for Windows, Version 3.00 R1 dialog box, doubleclick on the **Minimal Configuration** optionand the **Super-TCP Minimal Configuration** dialog box will be displayed.

Doubleclick on the **Advanced** option and the **Hostname** dialog box will appear.

Doubleclick on the **Subnetwork Setup** option and the **SubNetwork Address Mapping** dialog box will appear.

In the **IP Address Type** field click on the **Bootp** option and fill in the appropriate information on the following lines.

Note that the information provided is for example only. Get the necessary information from the Network System Administrator.

Bootp Server Address **137.243.50.3**

This is the address of the host that contains the specific Network information for your PC.

Bootp Server Name **megan**

This is the actual name of the host that will provide the network information.

IP Address Mask **255.255.254.0**

This is the subnet mask that the local network utilizes.

Click the OK button to enter the data.

Click the OK or DONE buttons (whichever is presented on the dialog box) as you back out of the setup program.

Reboot the computer to request network booting information from the bootp host.

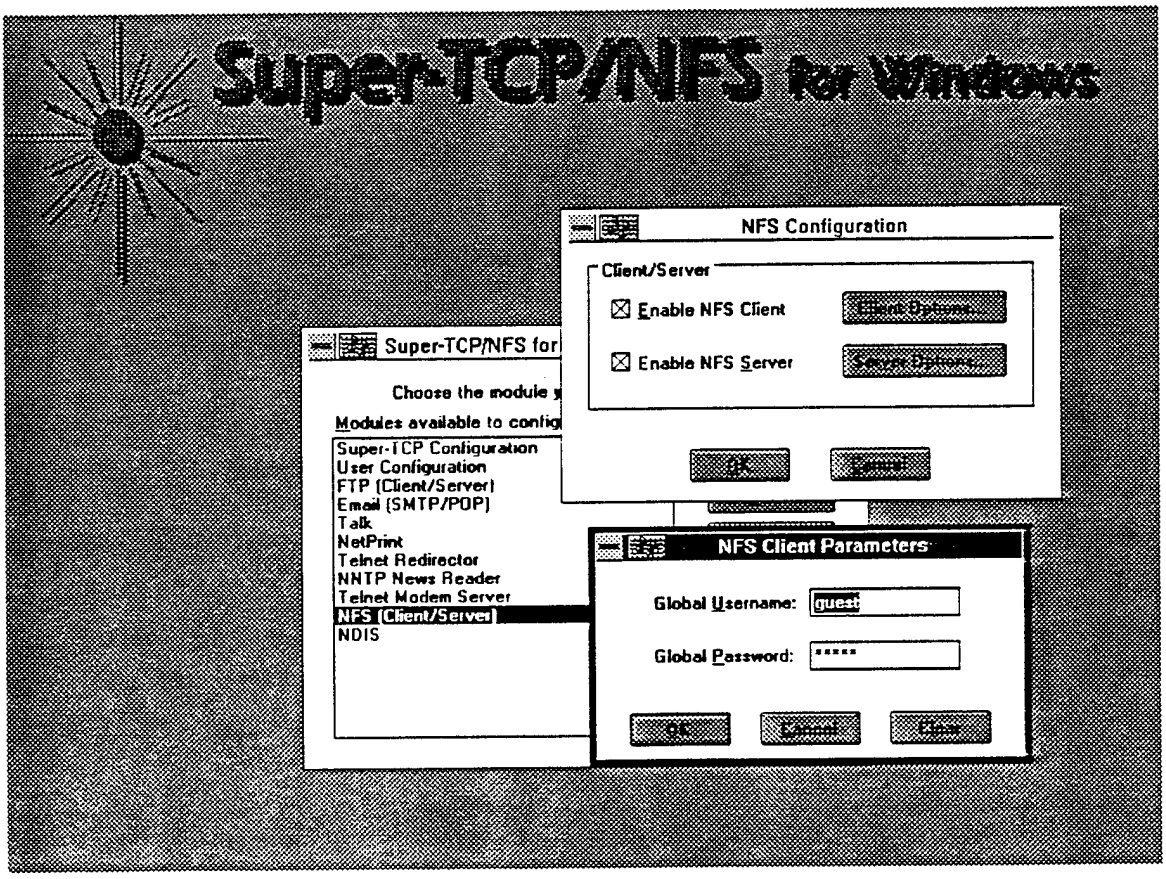
The Installation is completed for the Bootp option.

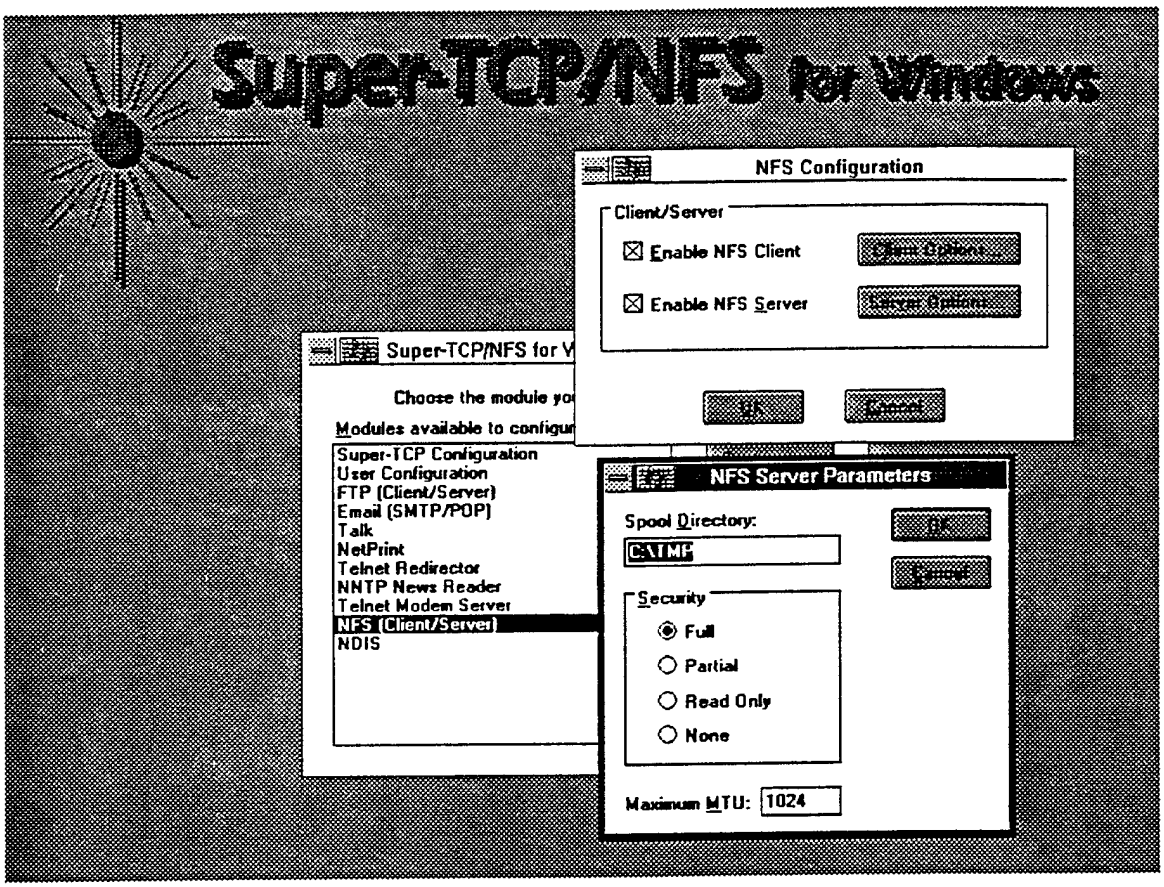
The following procedures outline the NFS installation and configuration for the SuperTCP/NFS for Windows, Version 3.00 R1 software application.

NOTE

The NFS option illustrated here is NOT included in the Desktop IV software package. This software was bought commercially off the shelf and included the NFS information. The Government version of Super-TCP is identical in with the version available off the shelf, but the government negotiated a NO NFS application when they requested bids under Desktop IV competition. The governement is now negotiating with the Desktop IV office and Frontier to add the NFS option to the Select Line Item Numbers (SLINs) under Desktop IV. Since there is a good possiblility that the NFS option will be added, it was deemed important to investigate the advantages it may provide in file sharing, etc.

This particular example illustrates the configuration of the NFS software after the initial installation of the software package. During the actual install process, the information will look identical to the information presented.





The configuration of the NFS option is relatively simple.

You must enable the NFS Server and Client options. This will permit mounting other users' harddrives and vice-versa.

Enabling the NFS Server and Client consists of clicking on the box provided by each name in the dialog box and clicking on the OK button.

Additional information may be configured in the **Options** option for the **Server** and the **Client**, but it is not necessary. The default information is adequate.

Reboot the computer when you are through to initiate the NFS capability.

The autoexec.bat file will need to be modified to contain the **nfsinit** command in the SuperTCP area.

The following is what the autoexec.bat and config.sys files should look like when configuration is properly completed.

AUTOEXEC.BAT

@ECHO OFF
LH /L:1,13984 C:\DOS\share.exe /f:4096 /l:25
LH /L:0;1,42384 /S C:\DOS\SMARTDRV.EXE
PROMPT pg
PATH
C:\EXCEL;C:\WINWORD;C:\WINDOWS;C:\DOS;C:\WINDOWS\PACKRAT;C:\WINBAS
E;c:\temp;c:\supertcp
SET TEMP=C:\DOS
rem WIN :
LH /L:1,6400 doskey
REM Frontier Begin Modifications
SET PATH=%PATH%;C:\SUPERTCP
SET SUPERTCP=C:\WINDOWS\SUPERTCP.INI
c:\supertcp\netbind
C:\SUPERTCP\nfsinit
REM Frontier End Modifications

CONFIG.SYS

DEVICE=C:\DOS\HIMEM.SYS
DEVICE=C:\DOS\EMM386.EXE NOEMS HIGHSCAN X=C800-C9FF WIN=ED00-EFFF
WIN=EA00-ECFF
BUFFERS=15,0
FILES=45
DOS=UMB
LASTDRIVE=E
FCBS=16,0
DEVICEHIGH /L:1,12048 =C:\DOS\SETVER.EXE
DOS=HIGH
STACKS=9,256
DEVICEHIGH /L:1,16352 =C:\PCTG30\ASYNDRVR.SYS NAME=ASYNC4, PORT=4
device=c:\supertcp\protman.dos /i:c:\supertcp
DEVICEHIGH /L:1,5504 =C:\SUPERTCP\STCPNDIS.DOS
DEVICEHIGH /L:1,22736 =C:\SUPERTCP\SMCMAC.DOS